What is claimed is:

1.   A file system for a device simultaneously recording/reproducing video(s) in/from a randomly
5   accessible storage unit from at least one channel, comprising:

an access unit determining unit determining an access unit, which is a size of an access made to the storage unit, for each video to be recorded/reproduced;
10   and

an accessing unit recording a video in the access unit so that only video data of a same program is recorded in each management block set in a storage area of the storage unit, when the video is recorded in the storage
15   unit.

2.   The file system according to claim 1, wherein

said access unit determining unit determines the
20   access unit a size of which satisfies a condition that

a transfer time of data by the access unit > a processing time of data accumulated during an overhead processing time that the storage unit requires to transfer data

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3.   The file system according to claim 1, wherein

said access unit determining unit determines the access unit a size of which satisfies a condition that

5   the access unit / a data transfer speed of the storage unit > an overhead processing time that the storage unit requires to transfer data × total sum of encoding rates of data / a margin of a transfer processing speed

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4.   The file system according to claim 1, wherein

the access unit is a size of 1/natural number of a size of the management block.

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5.   The file system according to claim 1, further comprising

a data erasing unit erasing a video stored in the storage unit in units of management blocks.

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6.   The file system according to claim 1, further comprising:

a management block determining unit determining a size of the management block according to random access

25   performance of the storage unit and a maximum of access

requested performance of the storage unit; and

a formatting unit initializing the storage unit based on the size of the management block, which is determined by said management block determining unit.

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7.   The file system according to claim 6, wherein

said management block determining unit measures the random access performance of the storage unit, and

10   determines the size of the management block in comparison with the maximum of requested performance.

8.   The file system according to claim 1, further comprising

15   a video table storing conditions for determining the access unit, wherein

said access unit determining unit determines the access unit by referencing said video table.

20   9.   The file system according to claim 8, further comprising

a condition changing unit changing a condition for determining the access unit within said video table while a video is recorded/reproduced, wherein

25   said access unit determining unit newly

determines the access unit in order to cope with a change in the condition, which is made by said condition changing unit.

5   10.   The file system according to claim 1, wherein

conditions for determining the access unit include the number of channels, and an encoding rate of each video.

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11.   The file system according to claim 1, further comprising

a management block table to which management information for each management block is registered.

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12.   The file system according to claim 11, further comprising

a block allocating unit allocating a management block having an unused or an empty area as a target block,

20   in which a video is to be registered by referencing said management block table, in response to a request to record the video, wherein

said accessing unit records the video in the management block allocated by said block allocating

25   unit.

13.   The file system according to claim 11, further comprising

a block searching unit searching for a management

5   block, in which a corresponding video is recorded, by referencing said management block table, in response to a request to reproduce the video, wherein

said accessing unit reads the video from the management block searched by said block searching unit.

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14.   The file system according to claim 11, further comprising

an editing unit editing a video by changing information indicting a connection between management

15   blocks, which is included in the management information.

15.   A file system for a device simultaneously accessing a randomly accessible storage unit from a plurality of channels, comprising:

20   an access unit determining unit determining an access unit, which is a size when an access is made to the storage unit for each of the plurality of channels based on conditions for reading/writing data from/to the storage unit; and

25   accessing unit reading/writing data by the access

unit determined for each of the plurality of channels in an order of nearer processing time limits in response to a request to read/write data from the plurality of channels.

16.   The file system according to claim 15, wherein

said accessing unit write the data to each management block set in a storage area of the storage unit, so that only data from one channel is recorded in one management block, in response to a request to write the data.

17.   A file system for a device simultaneously recording/reproducing video(s) in/from randomly accessible storage means from at least one channel, comprising:

access unit determining means for determining an access unit, which is a size of an access made to the storage unit, for each video to be recorded/reproduced; and

accessing means for recording a video in the access unit so that only video data of a same program is recorded in each management block set in a storage area of the storage means, when the video is recorded

in the storage unit.

18. A file system for a device simultaneously
accessing randomly accessible storage means from a
5   plurality of channels, comprising:
access unit determining means for determining an
access unit, which is a size when an access is made to
the storage means for each of the plurality of channels
based on conditions for reading/writing data from/to
10 the storage means; and
accessing means for reading/writing data by the
access unit determined for each of the plurality of
channels in an order of nearer processing time limits
in response to a request to read/write data from the
15 plurality of channels.

19. A method managing a storage area of a
randomly accessible storage unit that is accessed
simultaneously from one or more channels, comprising:
20   setting a plurality of management blocks in the
storage area;
determining an access unit, which is a size of an
access made to the storage unit; and
recording a video in the access unit so that only
25 video data of a same program is recorded in one

management block, when the video is recorded in the storage unit.

20. A computer-readable storage medium on which is recorded a program for causing a computer accessing a randomly accessible storage unit that is simultaneously accessed from at least one channel to execute a process, said process comprising:

determining an access unit, which is a size of an access made to the storage unit; and

recording data in the access unit so that only data from one channel is recorded in one management block among management blocks set in a storage area of the storage unit, when the data is recorded in the storage unit.

21. A computer-readable storage medium on which is recorded a program for causing a computer accessing a randomly accessible storage unit that is simultaneously accessed from at least one channel to execute a process, said process comprising:

examining random access performance of the storage unit;

obtaining a size of a management block by making a comparison between the random access performance and

a total sum of encoding rates of simultaneously accessed

videos; and

setting a management block having an obtained size

in the storage unit.

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